

REMARKS

Claims 1, 2, 5, 6, 9-13 are pending in the application.

Claim Objection

Claims 1 and 10 are objected to for reciting "an image" without prior mention in the claims; the claim language has been corrected in that the step of recording an image is now at the beginning of the paragraph in question.

Claim Rejections - 35 U.S.C. 112

Claims 1 and 10 stand rejected under 35 U.S.C. 112, 1st paragraph, as failing to comply with the written description requirement and also under 35 U.S.C. 112, 2nd paragraph, as being indefinite.

The examiner pointed out that no opening of the input unit is disclosed (item 10). Applicant disagrees. The specification in the 3rd paragraph of page 1 and also in the paragraph bridging pages 1 and 2 discloses that sales machines have an opening for documents and further that documents are transported into the interior by a transport mechanism and rejected documents are "rejected via the same or a separate opening".

The examiner further objected to the claim language "accepting the document and maintaining the document in the intermediate storage" as not being supported by the original disclosure (item 11). The claim language has been supplemented by the wording "until the amount of the document corresponds to or exceeds ..." to be in line with the disclosure.

The examiner further objected to the claim language "visual verification including ... accepting ... maintaining ... refusing or feeding" as not being supported by the original disclosure (items 12, 18, 19). In response to this rejection, the claim language has been amended so that now the claims are limited to accepting or refusing.

The examiner further objected to the claim language "storage for positively authenticated documents" as not being supported by the original disclosure (item 13). It is respectfully submitted that this feature is disclosed in the 1st and 2nd sentences of the first paragraph of page 4 of the specification (" ... with a positive authentication the document is accepted. The document can be beneficially transported into a storage device..."). Applicant would like to point out that the "subject matter of a claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the

disclosure to satisfy the description requirement". See MPEP 2163.02, last paragraph.

The examiner also pointed out that the "visual verification" is presented such that it amounts to circular reasoning so that the claims are therefore indefinite (items 16, 17). The claim language has been amended to include visual examination as a step of visual verification so that a distinction is now being made.

The claims 1 and 10 have been carefully revised in view of examiner's remarks and are believed to have remedied the indefiniteness or the written description issues addressed by examiner.

Reconsideration and withdrawal of the rejection under 35 USC 112 are respectfully requested.

Rejection under 35 U.S.C. 103

Claims 1, 2, 5, 6, 9-13 stand rejected under 35 U.S.C. 103(a) as being unpatentable APA and US 2003/0059098 (*Jones*).

Claim 1 and claim 10 are based on the following steps:

- authenticating the document, wherein said authenticating the document is performed with a combination of at least two different verification methods;
- comparing the at least two verification methods with verification specifications;
- determining a probability of authenticity of the document;
- releasing the document for further processing, the further processing comprising:

accepting the document as positively authenticated when the probability meets predetermined criteria, and

(claim 1) maintaining the document in the intermediate storage until the amount of the document corresponds to or exceeds the amount of the ticket

(claim 10) transporting the document in the storage for positively authenticated documents; or

recording the document as an image and presenting the image to an operator for visual verification by the operator when the probability does not meet the predetermined criteria and the document is negatively authenticated, wherein the document is accepted when the document has passed a visual examination of the visual verification and the document is maintained in the intermediate storage, and the document is refused when the document does not pass the visual examination of the visual verification, wherein the document is fed to a separate storage device for invalid documents or ejected

The invention is thus directed to authentication based, from the start, on at least two verification methods. Based on the outcome of the at least two verification methods, the document is accepted or further checked if there is doubt in regard to its authenticity.

The examiner is using applicant's admitted prior art as the basis of the 35 USC 103 rejection. The prior art as discussed in the introductory portion of the specification employs a single verification method for authentication.

The object of the present invention is to provide a method for authentication of documents such that a high degree of certainty of authentication can be achieved in contrast to the prior art, as disclosed in the paragraph bridging pages 1 and 2 of the specification and the first full paragraph of page 2 of the specification. The invention basically addresses the problem that upon payment on a machine by means of banknotes a high rejection rate is usually observed and payment by means of banknotes is often frustrating because of this and thus unattractive to the customer. From the standpoint of a customer, a valid means of payment, i.e., the banknote, is not accepted by the machine, for example, because the banknote has folds, stains or tears or is worn. For the amounts that are usually to be paid, in particular in case of public transportation, payment by means of coins is often impractical because of the number of required coins.

When the security level regarding acceptance of the banknote is however lowered, the risk that counterfeit banknotes are accepted for payment will rise.

However, this uncertainty is unacceptable to the operator of the machine, i.e., the company offering items for sale.

The present invention, in contrast to the admitted prior art, employs at least two different verification methods from the start for the documents, wherein the least two different verification methods are compared with verification specifications and the probability for authenticity of documents is determined. The document is then released and either accepted, inasmuch as the probability fulfills a predetermined criterion, or, inasmuch as the probability does not fulfill a predetermined criterion, the document is subjected as a recorded image to visual examination by an operator whereupon the document is either accepted or rejected and the document transferred into a separate storage for unauthenticated documents or is ejected from the machine.

The present invention provides, in addition to already employing two verification methods, an additional means for authenticating banknotes in that before the banknote is finally rejected in case of a negative authentication result, based on the at least two prior verification methods, the banknote is presented to an operator for performing visual examination.

The operator, based on the recorded image, can determine that the banknote is counterfeit or a valid banknote. Accordingly, the operator can manually accept the questionable banknote without increasing significantly his risk of accepting counterfeit banknotes. At the same time, with the invention it is achieved that the method makes the machines more user-friendly for the customer because the rejection rate of valid banknotes can be reduced.

Admitted prior art presented in the introductory portion of the specification provides no teaching or suggestion to provide in case of a negative authentication by the machine a visual examination by scanning (recording) an image and presenting the image to an operator. Nothing is set forth in the brief discussion of the prior art that would motivate a person skilled in the art to do so.

The reference to *Jones* also provides no motivation for a person skilled in the art to modify admitted prior art by visual examination based on scanning and presentation to an operator. Firstly, it should be mentioned that *Jones* addresses the problem of examining a plurality of banknotes with regard to their validity in a short period of time.

For this purpose, *Jones* proposes that all received banknotes are first scanned, that identification characteristics of each banknote is recorded and then checked for validity. Moreover, the teaching of *Jones* requires that the user himself must provide a means of identification so that according to the teaching of *Jones* the recorded banknotes are assigned to a specified user (see page 1, paragraph 0010, as well as page 3, paragraph 0015, of this reference). *Jones* further teaches that when a serial number of the banknotes does not correspond to any serial number saved in a database, it is necessary to perform counterfeiting tests (see page 4, paragraph 0060, first sentence). These can be UV tests, IR tests, magnetic tests and the like. Moreover, *Jones* proposes that the scanned-in image of the banknotes is to be checked by comparison with a valid banknote. When these tests are negative, the banknote is characterized or identified as counterfeit and marked by a flag. In other cases, when the banknote has passed all tests, the image of the banknotes is saved in a storage device (see page 4, paragraph 0060, fifth and sixth sentences).

In contrast to the present invention, *Jones* proposes that all banknotes are to be scanned wherein only in case of acceptance of the banknotes storage of the image is done. Another difference to the present invention is that the acceptance of banknotes as a valid means of payment requires that the payment means (banknote) is supplied to a storage.

A further embodiment of *Jones* provides that the suspicious banknote is conveyed to a discharge opening so that an operator can perform the visual examination of the banknote (see page 5, paragraph 0070). Also, it may be provided that the banknote is displayed as an image on a monitor for visual examination by an operator (*Jones*, page 6, paragraph 0071, 7th sentence).

In any case, the teaching of *Jones* proposes that before any further action is carried out with the banknote the banknote must be scanned. This is in contrast to the present invention where scanning (recording) of the banknote is only carried out in case that the banknote cannot be authenticated by the at least two verification methods. Accordingly, with the present invention the expenditure with regard to scanning and data processing is reduced so that on the one hand the machine for performing the method can be of a compact design and on the other hand the data quantity to be

processed is reduced. This is not achievable by the method proposed by *Jones* as all of the presented banknotes, independent of an authentication result, must be scanned.

Therefore, *Jones* cannot provide a suggestion for scanning only in case the banknote has been identified as being suspicious after having undergone at least two prior verification methods.

This is also evidenced by the fact that *Jones* concerns a system of tracking banknotes in a bank (page 1, paragraphs 0006 through 0008); tracking of banknotes is not a requirement and not needed in connection with sales machines.

Therefore, admitted prior art in view of *Jones* cannot make obvious the invention as claimed in claims 1 and 10 and their dependent claims, respectively.

Reconsideration and withdrawal of the rejection of the claims under 35 USC 103 are therefore respectfully requested.

CONCLUSION

In view of the foregoing, it is submitted that this application is now in condition for allowance and such allowance is respectfully solicited.

Should the Examiner have any further objections or suggestions, the undersigned would appreciate a phone call or **e-mail** from the examiner to discuss appropriate amendments to place the application into condition for allowance.

Authorization is herewith given to charge any fees or any shortages in any fees required during prosecution of this application and not paid by other means to Patent and Trademark Office deposit account 50-1199.

Respectfully submitted on Dezember 20, 2010,

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